

***Army Blood Program Briefing
for
26th Annual Meeting of the Society of
Armed Forces Medical Laboratory
Scientists***

Director, Army Blood Program

Office of The Surgeon General



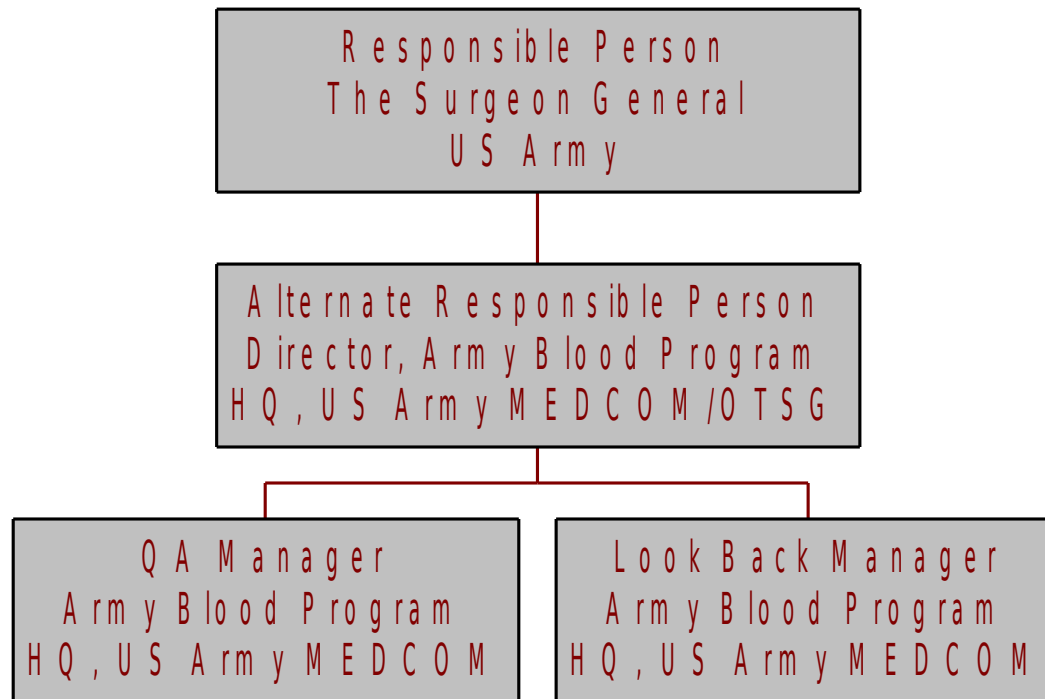
AGENDA



- **Army Blood Program Organizational and Regulatory Structures**
- **Army Blood Support to Operation Noble Eagle (ONE) and Operation Enduring Freedom (OEF)**
- **Unified Command Issues**
 - **EUCOM**
 - **Korea (PACOM)**
- **Combat Development Update**



ARMY BLOOD PROGRAM ORGANIZATION & REGULATORY STRUCTURES





ARMY BLOOD PROGRAM ORGANIZATION & REGULATORY STRUCTURES

14 FDA Registered Facilities

Dewitt ACH, Fort Belvoir, VA

Winn ACH, Fort Stewart, GA

Banchfield ACH, Fort Campbell, KY

McDonald ACH, Fort Eustis, VA

67th CSH, Wuerzburg, Germany

95th CSH, Heidelberg, Germany

Darnall ACH, Fort Hood, TX

Weed ACH, Fort Irwin, CA

Ireland ACH, Fort Knox, KY

121st Gen Hospital, Yongsan, Korea

**Landstuhl RMC, Landstuhl,
Germany**

Madigan AMC, Fort Lewis, WA

Reynolds ACH, Fort Sill, OK

Lyster ACH, Fort Rucker, AL

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ARMY BLOOD PROGRAM ORGANIZATION & REGULATORY STRUCTURES

19 FDA Licensed Facilities

- **Basset ACH, Fort Wainwright, Alaska**
- **Bayne-Jones ACH, Fort Polk, Louisiana**
- **Brooke AMC, Fort Sam Houston, Texas**
- **Dwight David Eisenhower AMC, Fort Gordon, Georgia**
- **Evans ACH, Fort Carson, Colorado**
- **Frank R Camp Memorial Blood Center, Fort Knox, Kentucky**
- **General Leonard Wood ACH, Fort Leonard Word, Missouri**
- **Irwin ACH, Fort Riley, Kansas**
- **Armed Services Blood Bank Center, Tacoma, Washington**
- **Martin ACH, Fort Benning, Georgia**
- **Montcrief ACH, Fort Jackson, South Carolina**

- **Tripler AMC, Honolulu, Hawaii**
- Facilities currently collecting blood

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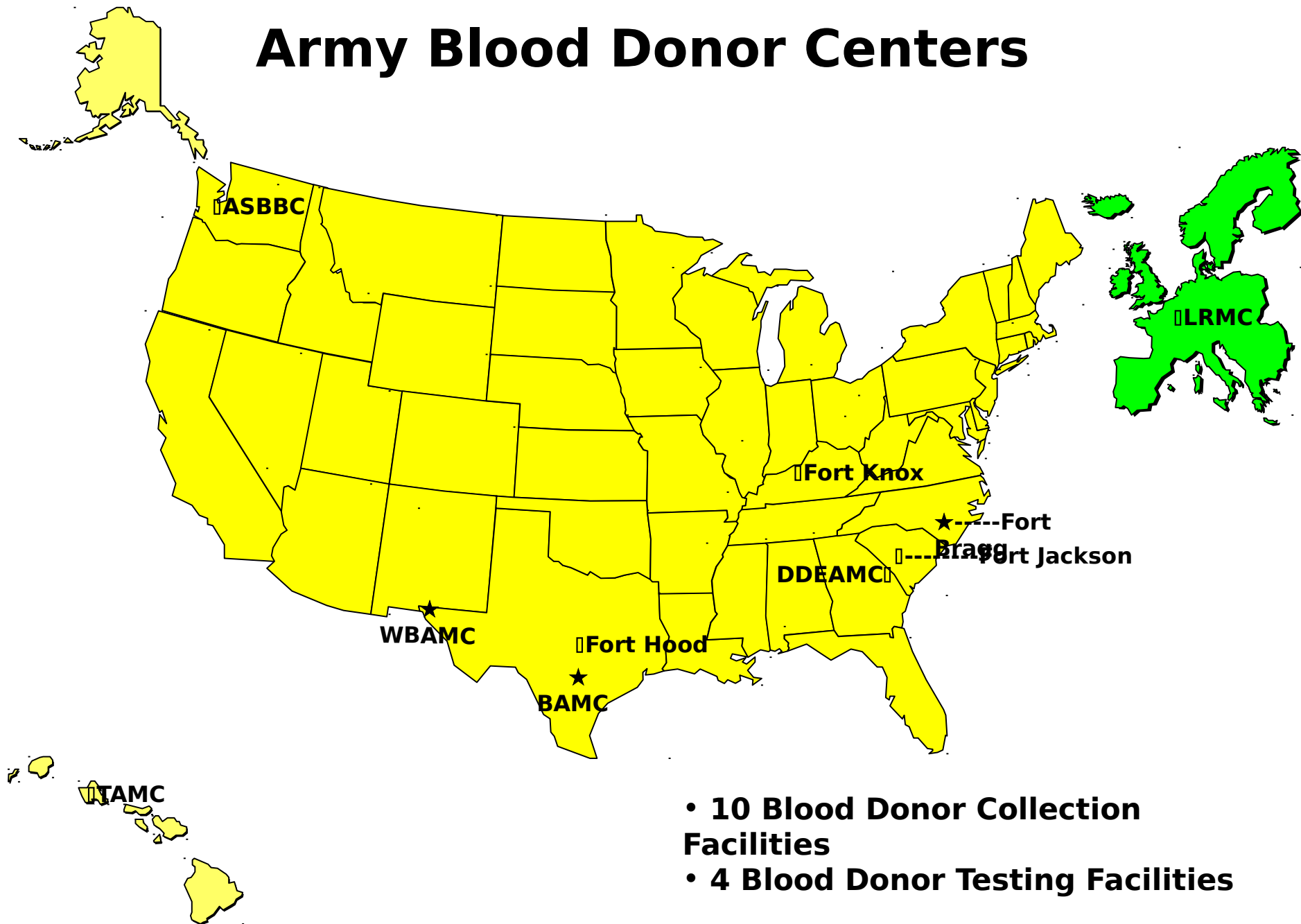


ARMY BLOOD PROGRAM ORGANIZATION & REGULATORY STRUCTURES

19 FDA Licensed Facilities - Continued

- **Keller ACH, West Point, New York**
- **USAREUR Blood Donor Center, Landstuhl, Germany**
- **USFK Blood Donor Center, Seoul, Korea**
- **Walter Reed AMC, Washington, District of Columbia**
- **William Beaumont AMC, El Paso, Texas**
- **Womack AMC, Fort Bragg, North Carolina**

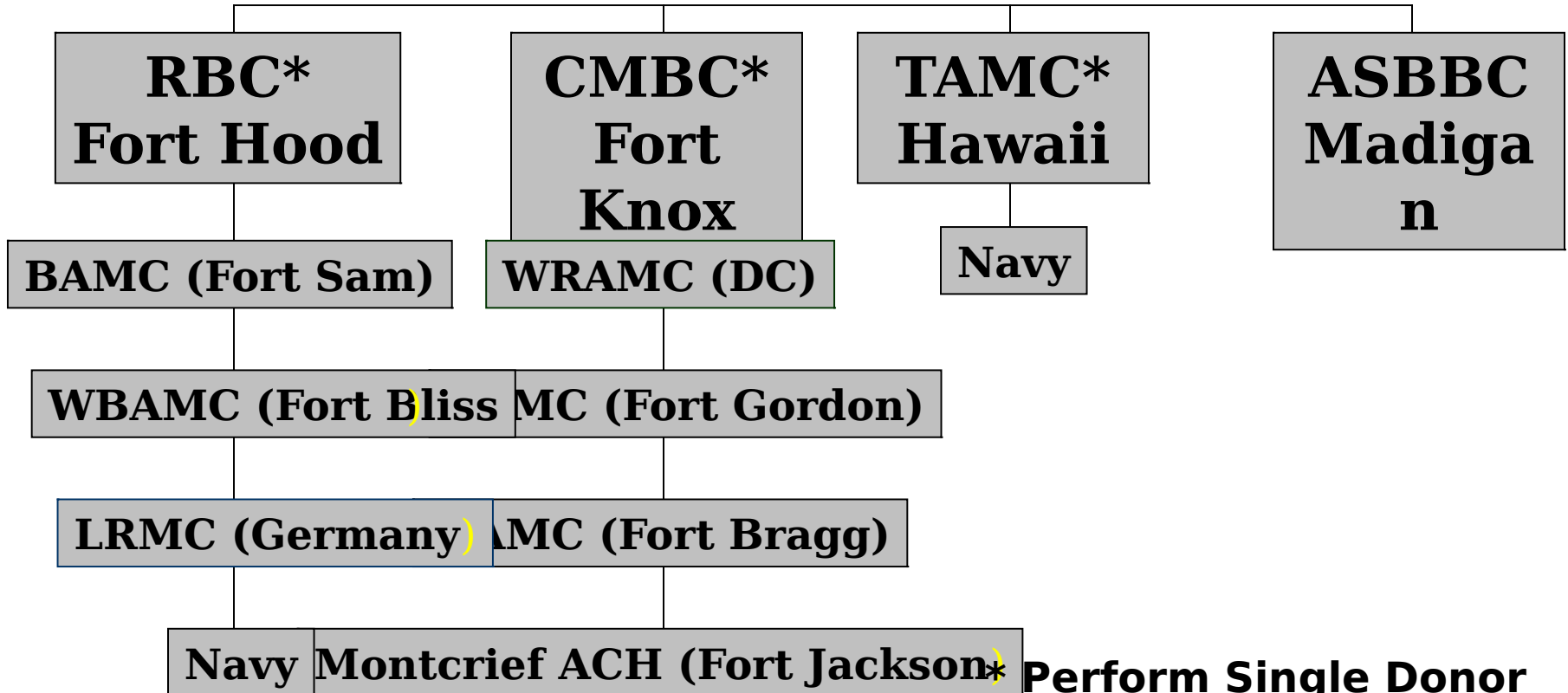
Army Blood Donor Centers





ARMY BLOOD PROGRAM ORGANIZATION & REGULATORY STRUCTURES

Blood Donor Testing Facilities



Perform Single Donor
HIV/HCV testing under an
IND protocol

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ARMY BLOOD PROGRAM ORGANIZATION & REGULATORY STRUCTURES

Outputs ~ Army Blood Program Collections

- **RBCs** **50,000**
- **Pheresis Platelets** **3,500**
- **Platelets** **5,000**
- **Fresh Frozen Plasma** **14,000**

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Army Blood Support for ONE/OEF



- **Army blood support on/after 11 Sep 2001 (ONE)**
 - **WRAMC and Ft. MEADE hospitals provided blood support to the NCR in response to the Pentagon Terrorist Attack**
 - **During suspension of air travel directly after 11 Sep 2001 terrorist attack, TAMC tested donor specimens for Blood Bank of Hawaii**



Army Blood Support for ONE/OEF



- **In support of OEF, ASBPO increased Services ASWBPL quotas to support operations in SWA (CENTCOM), Europe (EUCOM), and the Pacific (PACOM)**

➤ **Services ASWBPL contingency blood quotas doubled:**

- **Weekly ASWBPL contingency blood quotas for all Services: 500 units of PRBCs/week**
- **Weekly ASWBPL contingency blood quotas for Army: 242 units of PRBCs/week**



Army Blood Support for ONE/OEF



- **Army MTFs deployed in support of OEF received initial blood supply in the CENTCOM AO**
 - **Army AC Forward Surgical Teams (FST) deployed with 30-50 units of Group O PRBCs and 2 lab techs (91Ks not organic to FST)**
 - **Some Army Special Operations Forces (SOF) deployed with 10-20 units of Group O PRBCs**
 - **Army SOF carry packs to draw blood in emergencies and do not normally deploy with blood**



Army Blood Support for ONE/OEF



- **Currently AC Army BDCs are operating at maximum capacity to meet current blood requirement without augmentation by Army RC Expansion BDCs**
 - **13 Army RC BDCs throughout CONUS aligned to our 10 AC Army BDCs and 2 ASWBPLs to augment them during contingencies**
 - ▮ **One Army RC BDC located at Durham, NC activated/deployed during OEF to augment BDC at Fort Bragg, NC**



Army Blood Support for ONE/OEF



Current RC BDCs and Alignment with AC

RC Unit Name	RC Unit Location	BDCs AC Unit Aligned	Total Personnel
1. 7227 MSU BDC	Columbia, MO	Fort Hood, TX	24 Total: 2 Off, 22 Enl
2. 7233 MSU BDC	Tuskegee, AL	Fort Hood, TX	44 Total: 4 Off, 40 Enl
3. 7218 MSU BDC	Louisville, KY	Fort Knox, KY	44 Total: 4 Off, 40 Enl
4. 5501 MSU BDC	San Antonio, TX	Fort Sam Houston, TX	24 Total: 2 Off, 22 Enl
5. 7236 MSU BDC*	Durham, NC	Fort Bragg, NC	24 Total: 2 Off, 22 Enl
6. 7217 MSU BDC	Perrine, FL	Fort Gordon, GA	24 Total: 2 Off, 22 Enl
7. 4223 MSU BDC	Omaha, NE	Fort Bliss, TX	24 Total: 2 Off, 22 Enl
8. 7220 MSU BDC	Tucson, AZ	Fort Sill, OK	35 Total: 3 Off, 32 Enl
9. 7226 MSUBDC	Fort Jackson, SC	Fort Jackson, SC	24 Total: 2 Off, 22 Enl
*Major Emmett Gourdine, USAR, 10. 4219 MSU Picatinny Arsenal,		WRAMC/ASBBC-NCR	24 Total: 2 Off, 22



Army Blood Support for ONE/OEF



- **Any significant increase in blood requirements for OEF will require RC BDC activation/deployment to augment AC BDCs**
 - **Challenges/Concerns related to RC BDC activation/deployment:**
 - **Staffing of current RC BDCs before activation/deployment is very low**
 - **Increased funding required for supplies, civilian overtime, and travel**



Army Blood Support for ONE/OEF



- **Other operational OEF challenges/concerns**
 - **Inadequate staffing of lab techs in Army AC BDCs**
 - **Degradation of laboratory operations at Army AC fixed hospital laboratories that must provide 91K backfill for deployed Medical Logistics Battalion Blood Bank Platoons**
 - **Increased BDC costs due to civilian overtime and travel**



Army Blood Support for ONE/OEF



- **Lessons Learned thus far**
 - **Establish alternate plans for transporting and testing blood during national emergencies in case of curtailment of air travel (ONE)**
 - **Do not activate/deploy entire RC BDC unless absolutely necessary (OEF)**
 - **Need to effectively manage our donor populations on our military installations to ensure availability of blood when needed (ONE/OEF)**



Unified Command Issues



European Command (EUCOM)

- **EUCOM JBPO - US Army**
- **US Army Europe (USAREUR) BDC**
 - **Located at Landstuhl**
 - ▮ **Currently staffed with 3 civilians (5 auth, 7 req)**
 - ▮ **Primary staffing for USARUER BDC provided by 226th Medical Logistics Battalion Blood Bank Platoon**



Unified Command Issues EUCOM



- Maintains frozen blood stockpiles for contingencies
- Collects blood in theater and sends specimens to Fort Hood, TX BDC for testing
- Significant impact on blood collections in Europe due to implementation of vCJD donor deferral policy on 29 Oct 2001
 - ▮ Estimated 25-30% loss of donors due to vCJD



Unified Command Issues EUCOM



- **Major challenges/concerns facing the USAREUR BDC**
 - **Insufficient permanent party staffing to operate and maintain BDC operations**
 - ▢ **Significant loss of donors due to vCJD donor deferrals, which increases reliance on CONUS for blood for peacetime and contingency requirements**
 - ▢ **Frozen blood contingency stocks are rapidly out-dating**



Unified Command Issues EUCOM



- **Options under consideration to address these challenges/concerns**
 - ▢ **Establishment of an Armed Services Blood Bank Center (ASBBC) for Europe**
 - ▢ **Procurement of new frozen blood processing systems to increase the use of frozen blood to meet peacetime blood requirements**
 - ▢ **Armed Services Blood Program Frozen Blood Modernization Plan**



Unified Command Issues EUCOM



- **ASBBC-EUR Plan (Concept)**
 - **Under a Memorandum of Understanding (MOU), ASBBC-EUR would be established at Landstuhl, GE**
 - ▢ **ASBBC-EUR would be staffed by all 3 Services**
 - ▢ **ASBBC-EUR would provide blood support for all MTFs within the AOR (Lakenhealth self-sufficient)**
 - ▢ **ASBBC-EUR would provide for current contingency blood requirements for all 3 Services within the AOR**



Unified Command Issues EUCOM



Proposed ASBBC-EUR Staffing

QTY	GRADE	CLASS	COMPONENT	POSITION
1	O-4	71E8T	Army	Director
1	E-6/E-7	91KM4	Army	NCOIC
1	GS-11	GS644	DA Civilian	QA Officer
1	GS-09	GS340	DA Civilian	Recruiter
1	GS-07	GS644	DA Civilian	Lead Tech/DBSS Sys Admin
1	GS-05	GS645	DA Civilian	BDC Technician
1	E-5/E-6	4T0x1	Air Force	BDC Team Leader
2	E-3/E-4	4T0x1	Air Force	BDC Technician
1	E-5/E-6	HM8506	Navy	BDC Team Leader
2	E-3/E-4	HM8506	Navy	BDC Technicians
2	E-3/E-4	91KM4	Army	BDC Technicians

Total: 14

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Unified Command Issues EUCOM



- **Concept plan for the use of new frozen blood processing systems to increase frozen blood use during peacetime**
 - **Field new frozen blood processing systems and ultra-low freezers at Army MTFs in theater to significantly reduce reliance on liquid PRBCs**
 - **New frozen blood processing system increase post-thaw shelf-life of deglycerolized red cells to 14-days from 24-hours**
 - **More automated system that requires less tech intervention**



Unified Command Issues



- **Armed Services Blood Program Frozen Blood Modernization Plan will address outdating contingency frozen blood stock**
 - **7-year frozen blood replacement plan**
 - **Will replace the frozen blood contingency stocks that are rapidly out-dating**
 - **ASBPO and Services still working out details of the plan**



Unified Command Issues



Korea Area Joint Blood Program

- **Korea AJBPO**
- **Large inventory of contingency frozen blood stocks at 2 Frozen blood product depots in Korea**
 - **Frozen blood stocks are rapidly out-dating and some units are not fully tested (lack HIV-1p24Ag)**
 - ▮ **Ultra-low freezers for storing frozen blood are reaching their life expectancy and need replacement**



Unified Command Issues Korea (PACOM)



- **No peacetime BDC in Korea (no blood collections or testing)**
 - **Peacetime blood requirements met by liquid PRBCs provided by Navy (PACOM) and the limited use of frozen blood**
 - ▢ **Korean Red Cross provides platelets and PRBCs during emergencies**



Unified Command Issues Korea (PACOM)



- **Major challenges/concerns**
 - ▢ **Replacement of outdated contingency stocks of frozen blood and ultra-low freezers**
 - ▢ **Limited training opportunities**
 - ▢ **Implementing HA policy on the Use of Non-FDA licensed Blood Products**



Combat Development Update



- **Development of deployable field laboratory and blood bank units, doctrine, and equipment**
 - ▢ **Fielding of next generation Army blood bank units**
 - **Field testing of prototype portable field blood transport device**



Combat Development Update



Current Blood Bank Units

(MF2K)

Description

- Blood Bank Platoon, Medical Logistics Battalion (Forward)
- Blood Bank Platoon, Medical Logistics Battalion (Rear)

Advantages of MRI Blood Bank Units

Bank Units

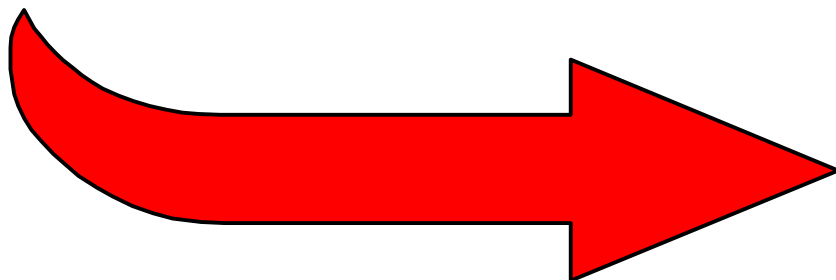
- Separate SBC from MEDLOG BN
- C2 through MEDLOG BN HHD versus MEDLOG BN Medical Companies
- Improved communications and medical equipment sets
- Improved organic mobility (30%)

Next Generation Blood Bank Units

(MRI)

Description

- Blood Support Detachment, HHD Medical Logistics Battalion



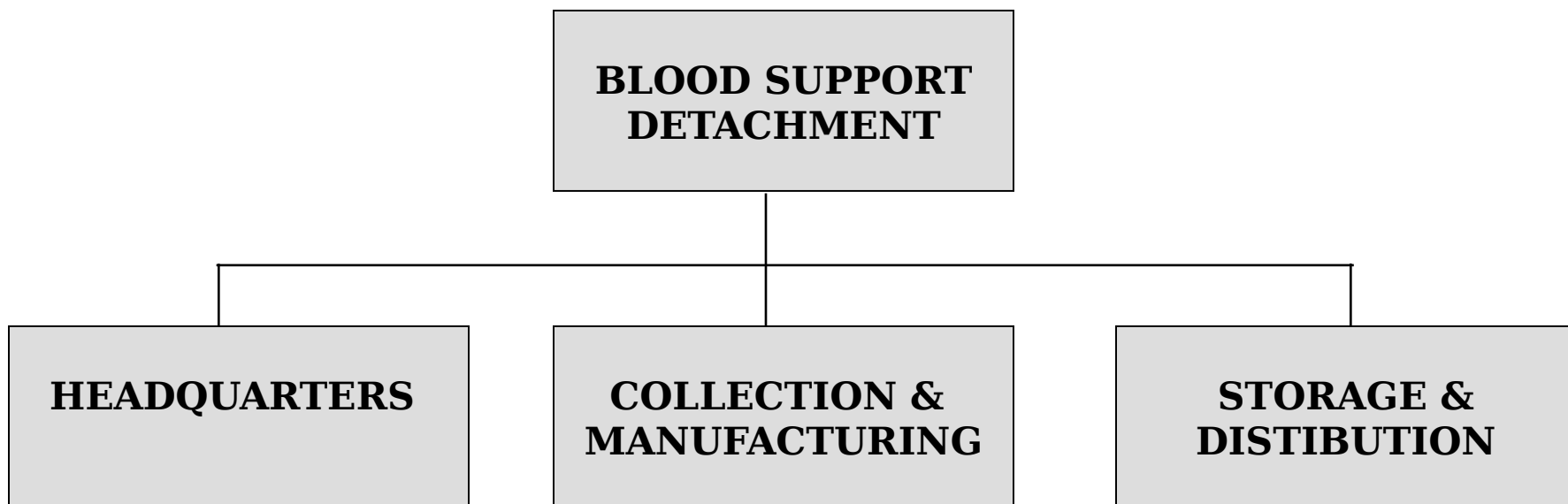
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Combat Development Update



Next Generation Blood Bank Unit (MRI) Organizational Structure

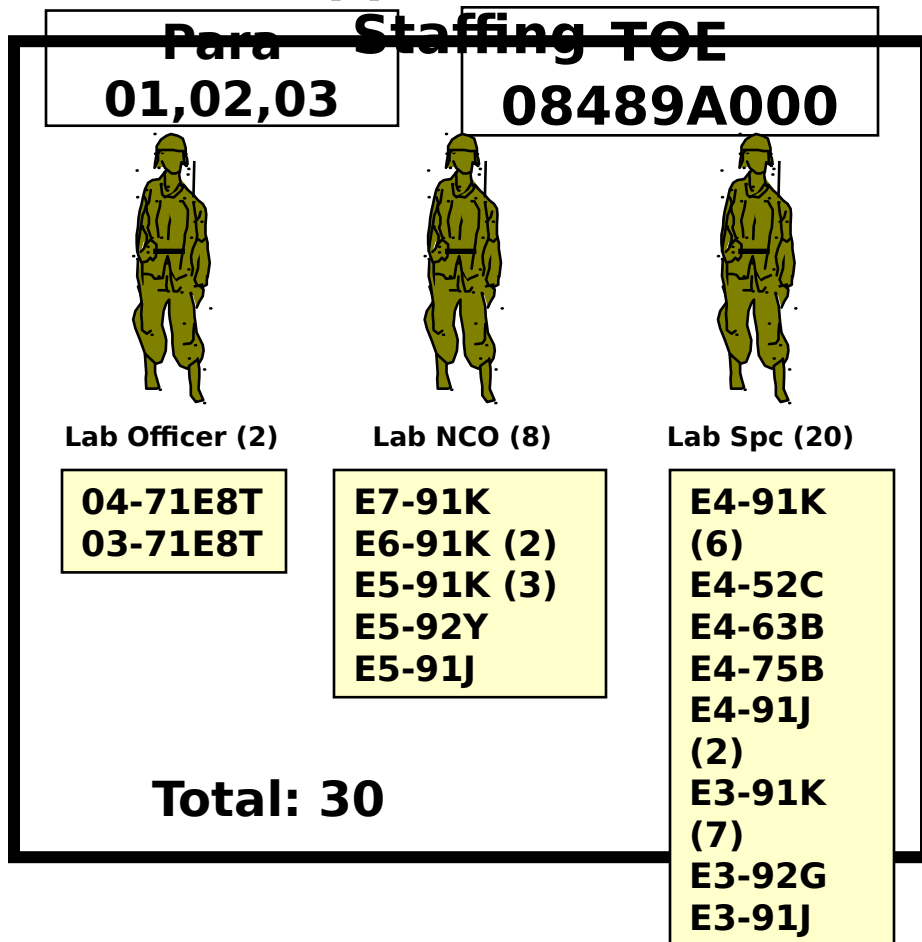




Combat Development Update



Blood Support Detachment



Blood Equipment Set (504)

Location: Corps

Basis of Allocation:

1per 100,000 troops in theater and 150,000 troops in joint operations

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Combat Development Update



- **Conversion of next generation deployable field Blood Bank Units**
 - **Total of 9 next generation Blood Support Detachments after conversion (4 AC/ 5 RC)**
 - ▢ **440th BSD activated early due to recent deployment to CENTCOM AO**



Combat Development Update



Blood Support Detachment Conversion

Schedule								Conversion	Conversion	Inactivation
SRC	Number	UIC	ULCCC	UNTDS	Location	State	Assign	Date	To	Date
08485L000	32	WBHVAA	BN	MED LOG BN (FWD)	FT BRAGG	1NC	FC	9/30/2008	08496A000	
08485L000	226	WHLRAA	BN	MED LOG BN (FWD)	PIRMASENS	GM	E5	9/30/2008	08496A000	
08485L000	172	WZKCAA	BN	MED LOG BN (FWD)	OGDEN	5UT	AR	9/30/2008	08496A000	
08485L000	388	WSAYAA	BN	MED LOG BN (FWD)	HAYS	5KS	AR	9/30/2008	08496A000	
08485L000	427	WZK2AA	BN	MED LOG BN (FWD)	FOREST PA	1GA	AR	9/30/2008	08496A000	
08695L000	16	WBHUA	BN	MED LOG BN (REAR)	YONG SAN	KS	P8	9/30/2008	08496A000	
08695L000	147	WG43AA	BN	MED LOG BN (REAR)	FT SAM HO	5TX	FC			6/15/02 **
08695L000	145	WVFJAA	BN	MED LOG BN (REAR)	SEAGOVILL	5TX	AR	9/16/2003	08496A000	
08695L000	424	WSAXAA	BN	MED LOG BN (REAR)	PEDRICKTO	1NJ	AR	9/30/2008	08496A000	
08897L000	6	WDCYAA	DET	TMMC	FT DETRIC	1MD	FC			10/15/00
08909L000	49	WBSNAA	DET	MED LOG SPT DET	FT HOOD	5TX	FC			10/15/01
08909L000	448	WSERAA	DET	MED LOG SPT DET	FT DES MO	5IA	AR			9/30/08
08909L000	482	WSFRAA	DET	MED LOG SPT DET	MILWAUKEE	1WI	AR			9/30/08
08909L000	484	WVDQAA	DET	MED LOG SPT DET	KALAMAZOO	1MI	AR			9/30/08
08909L000	1880	WZK4AA	DET	MED LOG SPT DET	ST LOUIS	5MO	AR			9/30/08
08489A000	440	WFQSAA	DET	BLOOD SUPPORT DET	FT SAM HO	5TX	FC	6/16/02 **	A	

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Combat Development Update



Portable Blood Transport Device

- **Prototype will be available for field testing during Summer 2002**
- **Essential Characteristics**
 - **Storage**
 - Sixty 250ml Units
 - Forty 450ml Whole Blood Uni
 - **Weight**
 - Approximately 84 lbs. empty





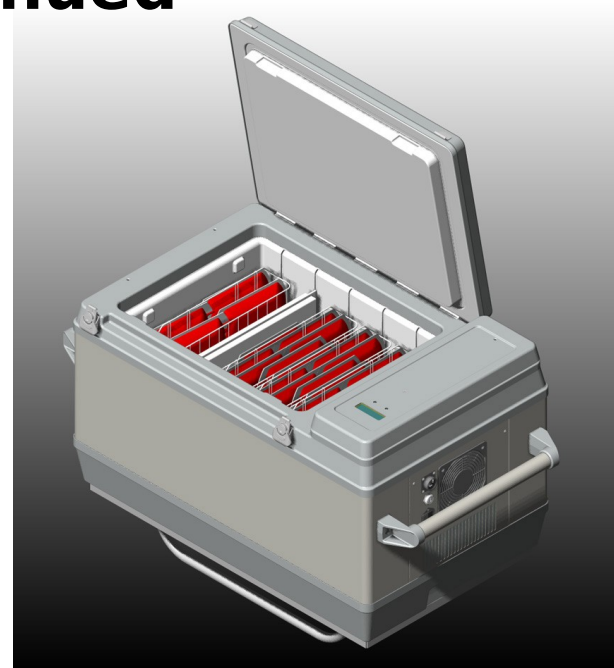
Combat Development Update



Essential Characteristics - continued

- **Power Requirements**

- 100 - 250 Volts
- 24 VDC
- two internal 12v batteries
- Solar Power Recharge



****Estimated 40 hr power without recharge****

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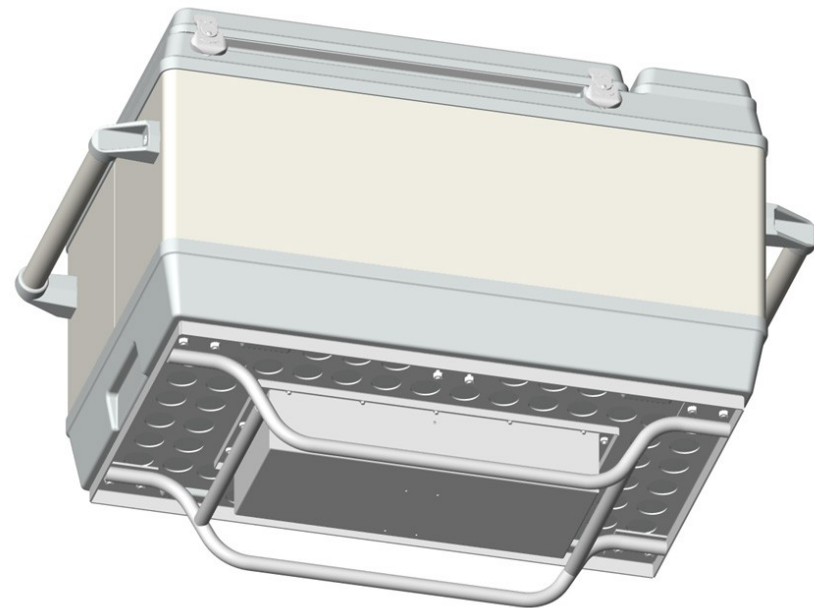


Combat Development Update



Essential Characteristics - continued

- Storage Temperatures
 - Minus 20° C - 10 °C*
 - Cool 8 units of whole blood within 8 Hours



***Toggle switch to change from refrigeration unit to freezer**



Combat Development Update



- **Major advantages of prototype portable blood transport device**
 - **Prototype can be used as a refrigerator or freezer to store PRBCs or frozen plasma**
 - **Prototype can go without power for up to 40 hours**
 - **Prototype will cool units versus refrigeration units with thermostabilizers that only maintain temperature**



Combat Development Update



- **Field test of prototype blood transport device programmed for Summer 2002**
 - **Prototype will be evaluated against the current portable blood refrigeration unit and a NATO-approved portable refrigeration system**
- **Directorate of Combat and Doctrine Development looking for Army units interested in participating in the field test**